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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/743,929	01/16/2001	Silvia Gohlke	P- 00,1958	8930

7590

10/09/2002

MORRISON & FOERSTER LLP
1650 TYSONS BOULEVARD
SUITE 300
MCLEAN, VA 22102

EXAMINER

GOFF II, JOHN L

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 10/09/2002

11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/743,929	Applicant(s) GOHLKE ET AL.	
	Examiner John L. Goff	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II, claims 9-16 and 18-20, in Paper No. 9 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 10 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. The term "essentially" in claim 10 is a relative term which renders the claim indefinite. The term "essentially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear as to the tolerance provided by the term "essentially". It is suggested to delete "essentially" from claim 10.
5. Claim 16 recites the limitation "wherein the component part" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 9, 12-16, and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishikawa (JP 06097656 A, Abstract of JP 06097656 A, and Machine translation of JP 06097656 A).

Nishikawa is directed to a method for producing a ceramic multilayer board (substrate for carrying semiconductors, etc.) wherein the board comprises an electrode, at least one layer composed of a first green sheet, which becomes compacted in a first temperature interval, and at least one layer composed of a second green sheet, which becomes compacted at a second temperature interval that is different from the first temperature interval (See Figure 3, the abstract lines 1-9, and the translation page 2, paragraph 11). Nishikawa teaches compacting the first green sheet at the temperature interval between 600 and 1000 °C and compacting the second green sheet at the temperature interval between 800 and 1500 °C. Nishikawa further teaches forming the electrode from metals such as copper, palladium, platinum, and/or silver (See the translation page 3, paragraphs 21 and 23).

8. Claims 9, 14, 15, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Gurkovich et al. (U.S. Patent 5,769,987).

Gurkovich et al. are directed to a method for producing a ceramic electronic package comprising an electronic passive device (capacitors, resistors, circulators, etc.), at least one layer

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composed of a ceramic dielectric sheet, which becomes compacted in a first temperature interval, and at least one layer composed of a second ceramic dielectric sheet, which becomes compacted at a second temperature interval that is different from the first temperature interval (Figures 1-5 and Column 1, lines 8-13 and Column 2, lines 30-32 and Column 3, lines 21-27 and 42-45 and Column 5, lines 57-58 and 65-66 and Column 6, lines 14-17, 20-21, and 46-48).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa as applied above in paragraph 7, and further in view of Polinski (U.S. Patent 5,708,570).

Nishikawa teaches all of the limitations in claim 10 except for a specific teaching on the first and second green sheets having essentially identical coefficients of expansion. However, it

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is well known in the art when forming green layer stacks to use layers having essentially identical coefficients of expansion to ensure the layer stack does not crack and/or distort after compacting as shown for example by Polinski. One of ordinary skill in the art at the time the invention was made would have readily appreciated using in Nishikawa green layers having essentially identical coefficients of expansion as was well known in the art and shown for example by Polinski to ensure the layer stack does not crack and/or distort after compacting.

Polinski is directed to a ceramic structure comprising electronic components, a plurality of green layers, and shrinkage control layers (Figure 2 and Column 4, lines 28-32 and 43-45). Polinski teaches that the coefficients of expansion for the electronic components, green layers, and shrinkage control layers substantially match to ensure the structure does not crack and/or distort after firing (Column 1, lines 50-57 and Column 4, lines 17-23 and 45-48).

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa.

Nishikawa teaches all of the limitations in claim 11 as applied above except for a teaching of green layer stacks arranged one on top of another wherein the sequence of the bottom stack is arranged in the opposite direction as that of the top stack. As shown above Nishikawa teaches a layer stack comprising first and second green sheets. It is noted Nishikawa teaches arranging the layer stacks one on top of another wherein the sequence of the bottom stack is arranged in the same direction as that of the top stack (See Figure 3). However, the stack direction depends in part on the desired end use of the layer stack, and one of ordinary skill in the art would be readily expected to determine the layer stack direction without requiring undue experimentation.

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Conclusion


13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481**. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



John L. Goff
October 4, 2002


Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700